SCHOOL AND SOCIETY

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SCIENCE AND SOCIAL PHILOSOPHY: THE SCIENTIFIC POINT OF VIEW IN EDUCATION

By
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EDUCATION is a relatively youthful member of the academic family. In the sense that it is represented by university and college departments of education, it has a history of approximately fifty years. It is gradually developing a discipline of its own. The reasons why we are here discussing the relationship of science and social philosophy can be better understood if a few pertinent facts regarding the development of education as a field of study are reviewed.[1]

Education is an offshoot of philosophy and psychology. It has no genetic relationship with science. The early literature of education consisted of borrowings from generalizations of philosophy and psychology from which inferences were derived regarding methods of teaching. This methodology was determined by logical deductions rather than by empirical scientific study, and it rested on a foundation of authority instead of scientific evidence. Without doubt some sound principles of teaching were developed in this early literature, but there were also some very unsound ones.

An example of the kind of generalizations that guided education in this early period was the theory of child development of Rosenkranz who divided the life of the child into an intuitive, an imaginative, and a logical epoch. During the intuitive period education should appeal to the senses. Later imagination and memory were the key words. Eventually, at about the age of adolescence, education was to culminate in stirring up the logical processes. Even as late as 1908 Bagley adhered to this concept of the serial order of development of mental traits, basing his position on logical deduction rather than on scientific evidence. Eventually, research by Thorndike and others completely discredited this early view, but not until elementary schools had suffered much from the implications of the theories of Rosenkranz and Bagley which made of them memoriter schools with little experience available in problem solving.

[1] Paper read at a symposium of the American Association for the Advancement of Science, Section Q.

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The movement for the study of educational problems by means of scientific methods began to take hold around 1905, and by 1915 some substantial results were achieved. As an illustration of what some of these early scientific studies meant for education, a contrast may be drawn between two methods of constructing a curriculum in spelling. The first of these was that of a county superintendent in a middle western state who, in the year 1910, decided that she would write a series of textbooks in spelling for the elementary schools in her county. Accordingly, she sat down at her desk and, from her own personal beliefs as to what words should be spelled and in what grades, she wrote a series of texts which were published and were used by the children in that county. The principal bases for the selection and placement of words were her educational philosophy and her personal opinion which, as a county superintendent at that time, carried some authority.

In contrast, Leonard P. Ayres undertook to determine what words should be spelled by making a quantitative study to discover the words most commonly used. His resultant list of 1,000 words gave, for the first time, a scientific basis for the selection of words to be spelled. Furthermore, with his list of words of known frequency Ayres carried on a series of studies from which the relative difficulty of the words and their appropriate grade placement were determined. This list was later refined and broadened by studies of vocabularies derived from other samples. As a result of such studies, teachers of spelling have a body of scientific knowledge about spelling vocabularies on which they can base their decision as to the words to be spelled and the appropriate grade level. From such scientific studies as those of Ayres in spelling, Freeman and Thorndike in handwriting, and Courtis in arithmetic, there developed a quantitative literature of measurement applying to a considerable part of the curriculum.

Paralleling the development of scientific methods concerned with measuring the results of education and devising objective bases for curriculum selection, there were also psychological studies of learning modeled on the experimental methods in the psychological laboratories in Europe, particularly the laboratory of Wundt in Leipzig. These psychological experiments had a marked influence on methods of learning and teaching and made the treatment of these fields something very different from the earlier pedagogy.

This vigorous development of a scientific attack on the problems of education was carried on with increasing momentum until approximately 1930 when, with the onset of the depression, doubts arose as to whether the scientific method was adequate to deal with the pressing problems of education. It was argued, in the first place, that the scientific method was very slow and that many of the problems studied were narrow and trivial. Science was analytical and dealt with problems part by part. The language of the day was of "integrated wholes." Scientific methods seemed inadequate in the face of a nation-wide depression. It was argued further that the scientific method deals with facts and processes, while many questions of education are at the level of values and are beyond the scope of science. While scientific students had reservations as to the meaning of this assertion, nevertheless it carried considerable weight.

Perhaps the clearest indication as to what was happening in respect to scientific method as a mode of studying educational problems came from the changes in requirements for master's and doctor's degrees in departments of education in universities. Up to 1930 it was quite a universal practice to require a thesis for a master's degree and a scientific dissertation for the doctor's degree. Gradually, departments of education have substituted a paper for a thesis at the master's level, the paper consisting of a critical review or interpretation of secondary literature, rather than being based on primary evidence. At the doctor's level, changes from the scientific dissertation required for the Ph.D. have led to a treatment somewhat similar to the master's paper only at a higher level, leading to the doctor of education degree. The arguments for these changes were, in the main, that training in research was a vocational training, and, since most teachers did not intend to enter research as a vocation, they should, therefore, not be required to do research for their degree. There are many who take exception to this conclusion, but the argument was, nevertheless, effective. It was apparently not conceivable that teachers or school administrators might want to satisfy an intellectual curiosity concerning some school problems by applying scientific techniques to their study.

The net outcome of such factors as have been described is that, for a decade or more, scientific method in education has been on the defensive, and there is a feeling among some people that it is outmoded as a method of studying educational problems. There has been a revival of interest in problems of social philosophy, to be studied by other than scientific methods. The question now becomes: is this really an issue with a choice that has to be made between scientific method and philosophical method in studying education? Are there two distinct methods to be carried on by two distinct groups of people, the scientific students on the one hand and the philosophers on the other; or is there a way in which this seeming divergence may be directed into a unified attack on problems of education?

It is assumed that both the scientific method and the philosophic method have the same ultimate aims, namely, the development of a body of knowledge and truth concerning problems of education. The fundamental issue relates to one's basic theory of knowledge and the way truth may be known. Here the impression of the writer, who makes no pretense of expertness in philosophy, is that there are two general views as to how truth is known. There is apparently one view which depends, as stated by Dewey, "on *a priori* intuitions and upon an alleged faculty of pure Reason that grasps absolute nonempirical truth."[2] Bode, in referring to those holding this view, refuses to concede that they "have a special pipe-line to a transcendental reality beyond the world of our experience."[3] On the other hand, there seems to be another group of philosophers, such as Dewey and Bode, who accept the notion that all knowledge is derived from experience, that the contributions of science make the solid basis for philosophical thinking, but that philosophy deals with issues in ways other than the empirical methods of science. With the former group it is difficult to find any common ground; with the latter group there is every reason to hope for a relating of the ways of science and the ways of philosophy in the common search for truth.

For students of education, the scientific way seems to mean the attack on problems by the accumulation of evidence which may be analyzed and studied in order to develop generalizations of increasing scope and significance. The basic criterion seems to be the use of evidence to verify conclusions. If a generalization is true, there should be some quantitative evidence to support it. By using this scientific method of study, generalizations based on evidence relating to small problems will eventually fit together into larger generalizations, and those, in turn, into still larger ones until, as knowledge grows, it pyramids into higher and higher levels of understanding. While the method is originally inductive, it later becomes deductive in the sense that generalizations once established permit deductions which may at times result in application of principles to problems which subsume under them and at other times may eventuate in hypotheses for still further scientific study. The essence of the scientific method is that it rests basically on evidence and that there is no way to short-cut evidence or to go round it.

It is only after experience provides sufficient evidence to support a generalization that the process of deducing from it is in order. Even here, the scientist frequently feels somewhat more secure, if there is, along with the deduction, some evidence to verify it. Nor would the scientist concede that this desire for verification is something of a lower order to be designated as anti-intellectual. Indeed, it is this somewhat basic distrust on the part of the scientist of deductions that are unverified that leads to a frequent distrust of methods other than those of science. Reasoning may appear to be logical, but, without the element of verification from evidence, unacceptable conclusions may be reached. An example of this logical, nonempirical method is found in a widely quoted statement of Mr. Hutchins in his book on "The Higher Learning in America" which reads: "Education implies teaching. Teaching implies knowledge. Knowledge is truth. The truth is everywhere the same. Hence education should be everywhere the same."[4] The statement sounds logical, but I find myself quite unable to accept the conclusion. It would seem equally logical to make such a statement as the following: "Education implies learning. Learning implies learners. Learners are not all alike. Hence education should not be alike for all learners." Such a problem as that of the curriculum can not be solved as neatly and quickly as either of these statements would suggest. The scientific student immediately attacks Hutchins's statement on the grounds that it does not completely cover the case and that it overlooks entirely the nature of individual differences among learners concerning which there is at present a very substantial body of scientific knowledge. Such philosophical pronouncements concerning education not only fail to solve its problems, but inevitably lead to an uncritical acceptance of authority such as characterized the literature of education in the period prior to 1905. Regardless of whether the authority rests on official position or on scholarly eminence, it leads more often to learning what the authority says than why he says it. Scientific truth never rests on authority. Truth is truth, not because an authority states it, but because evidence, as well as reason, supports it. It is this persistent emphasis on evidence that is most characteristic of the scientific point of view. If this is anti-intellectual it is so only by definition.

The crux of the issue respecting science and social philosophy is whether science can ever go farther than simply establishing facts and can properly deal with questions of values or judgments or choices. I am quite ready to concede that scientific study cannot automatically result in determining values or choices. On the other hand, I believe that value judgments

[2] John Dewey, "The Scientific Movement in Education," p. 472. Thirty-seventh *Yearbook*, Part II, The National Society for the Study of Education, 1938.

[3] B. H. Bode, "How We Learn," p. 76. D. C. Heath and Company, 1940.

[4] R. M. Hutchins, "The Higher Learning In America," p. 66, University of Chicago Press, 1936.

that are based upon ignorance rather than upon scientific knowledge are likely to be bad judgments. Values are not things that exist out beyond the region of human experience; rather values are determined by human experience. Values are good because they are good for human beings. The test of a value is the test of experience. The reasons for accepting a given value pattern or for making a given judgment are more likely to be valid if they are based upon data which are true.

The question of the basis of value judgment was illustrated at one of the meetings of the National Society for the Study of Education in Boston several years ago. At this meeting Professor Kilpatrick proposed that science should deal with questions of fact, such as, for example, how to thaw out a frozen water pipe, but that only philosophy could deal with questions of value, such as a decision as to whether a farmer should send his daughter to college or should spend his money to install a system of sanitary plumbing on the farm. In the latter case the assertion was made that science could not help, but that the farmer needed to sit down and think out which alternative to choose. I am willing to agree with Professor Kilpatrick that the farmer may sit down to think it out, but I am not willing to agree that this describes the whole process. If the farmer is ignorant as to what happens on farms without sanitary plumbing systems and as to what happens to farm girls who do or do not go on to college, he has no adequate basis for deciding which way he should spend his money. What would help him most would be a body of scientific data showing the hazards of having a nonsanitary plumbing system and the hazards and assets of a college education for his daughter. Once having the facts at hand, the decision still must be made, and the facts themselves do not automatically render the decision. In some cases, the simple facts might show such predominant evidence in one direction that the choice would follow directly from awareness of what the situation is: whereas, in other cases, the evidence might be so evenly balanced that the decision may necessarily be determined by factors beyond science. I am quite willing to agree that there are questions of fact and questions of value. I am not willing to concede that science has nothing to offer in deciding questions of value. I would prefer to defend the position that one of the best ways to get answers to questions of value is to be fully aware of the scientific evidence that relates to the questions.

The scientific method of study has been described in such detail that there is rather widespread understanding of the general outline of its procedure. In the case of philosophy there seems to be not such a clear general understanding as to what are the techniques by means of which the philosopher arrives at his conclusions. I think it would be helpful if the philosophers would state to the layman what their procedure is. To illustrate, one encounters very frequently the statement that in studying a problem the assumptions must be stated and examined. In the proposals for doctors' dissertations in my own institution I have read scores of such assumptions set down by students. I am disturbed, in the first place, as to just how students arrive at what assumptions to set down and how many to give. I am still more disturbed by what is commonly called an examination of assumptions. I have still to learn, and perhaps I am unduly stupid in this respect, just what is the technique of examining an assumption. It would help me very much if someone competent in using the philosophical method would set down a few assumptions and then show just what are the steps in examining them and how one knows when they have been sufficiently examined. It seems to me that many of the assumptions so described should more properly be treated as hypotheses rather than assumptions. In addition to the examining of assumptions, what are the further techniques of philosophical method? Could these techniques be learned and used by scientists? Are not these methods frequently used by scientists in the broader interpretations of the results of their own studies?

If philosophers need the results of scientific methods for their thinking and if scientists need philosophical techniques for thinking about their results, would it not make sense to try, in the field of education, to give students enough training in both philosophy and scientific method so that they would be able to use both the empirical methods of science and the logical methods of philosophy? Might not scientists become competent as social philosophers in respect to their own fields, and social philosophers become acquainted with scientific methods and data in the areas they attempt to cover?

In graduate departments of education there has been more emphasis on training in scientific methods than in the methods of philosophy. Perhaps it is wise that the predominant emphasis on scientific methods of the 1920's be supplemented, at the present time, by an increased emphasis on methods of philosophy. Would it be possible to provide a basic understanding of techniques and methods in both science and philosophy? Might social philosophers benefit by more frequent attention to Anton Carlson's persistent query, "What is the evidence?" and might scientists properly extend their thinking to the social meanings of their findings? I see no possible advantage in trying to perpetuate a dichotomy respecting science and social philosophy.

Events . . .

UNIVERSITIES AND THE STATE

IT cannot yet be claimed that the relations between the governmental authorities and universities in the United States have been established in such a way that the universities have no reason to be disturbed by fear of state control. The problem is not confined to the United States. It was one of the topics discussed at the Conference of the Universities of the British Commonwealth held at Oxford last summer. It was the subject of the Rede lecture delivered at Cambridge on November 18 by Sir Walter Moberley, chairman of the University Grants Committee. The lecture, "Universities and the State," is reported in the *Times Educational Supplement*, November 20, and, if published in full, should be read by all interested in so vital an issue.

This issue has, of course, arisen from the increased financial support that must come from public funds. In England the grants from the Treasury, said Sir Walter, will in future probably "amount to not less than two thirds of the whole. Obviously this had given the government a formidable weapon for establishing control of university policy, if it were minded to use it, and if, in so doing, it were supported by public opinion." Neither of these conditions was likely to arise—that Parliament or the relevant administrative office would assume that they "knew better what was good for the universities than the universities themselves."

Discussing university autonomy Sir Walter said:

> To demand academic freedom was simply a way of saying that we got the best results in education and research if we left their management to people who knew something about them. It was said that he who pays the piper calls the tune. But the cogency of the doctrine varied with the piper. If you were engaging Toscanini and his orchestra, you would do well to leave to him the major voice in deciding the program.

There are no state universities in Britain similar in character to the state universities in the United States. Nevertheless what Sir Walter Moberley had to say about the British state-aided private universities applies equally to American institutions of higher education, whether state-controlled or not. In the following quotation the reader must bear in mind the American analogues:

> Admittedly the British universities were not state universities; but the nation could not regard them simply as private or voluntary societies, free without question to make their own rules, to go their own way, to conduct—and possibly even to wind up—their own affairs. In certain highly important respects at least they were national institutions; they powerfully affected national life at a hundred points and were vital to its well-being. They depended increasingly on the financial support of the Treasury, and they recognized obligations not only to this or that section but to the whole community. Hence the State as "the operative criticism of institutions" had a certain responsibility for keeping universities up to the mark. . . . The State was not morally free to mould the university to its will; nor was the university morally free to go its own way at its own pleasure.

There is much in Sir Walter Moberley's lecture that would be helpful in defining principles that should govern the relations between Federal government and education, between state and municipal authorities and their colleges and universities, and between boards of trustees and the institutions under their control. There might even be some helpful suggestions for those who have some unwarranted notions about academic freedom and for others who clamor for democratic participation in administration without assuming any responsibility.—I. L. K.

ANNUAL NATION-WIDE HIGH-SCHOOL TESTING PROGRAM ON RECENT SOCIAL AND SCIENTIFIC DEVELOPMENTS IN THE WORLD TODAY

THE fourth annual Nation-wide High School Testing Program has been announced by the Cooperative Test Division of the Educational Testing Service. The Cooperative Test of Recent Social and Scientific Developments used in this program is organized into two parts. Part I is concerned with social, economic, political, and military developments; Part II deals with developments in science, technology, and medicine. The questions are concerned primarily with broad movements and trends, with basic issues and principles, with broad generalizations and inferences. This program thus offers an objective means of measuring the student's ability to make sound and critical observations about recent changes and developments in our contemporary civilization and to recognize their underlying significance.

In the 1948 Nation-wide High School Testing Program, 642 high schools, representing all states, registered approximately 156,500 pupils. The results revealed that many high-school pupils are seriously uninformed about contemporary affairs. Judging from the comments of participating school principals, the test results stimulated a great deal of fruitful discussion concerning general educational objectives, and

they will be instrumental in bringing about some improvements in this situation.

Participating schools will be supplied with test materials, a central scoring service, a report on the results of their testing, and data for grade, regional, and nation-wide comparisons.

The dates scheduled for the program are April 1–30, 1949. Orders for test materials should be placed immediately. The cost of the service to each school will be 10 cents a pupil plus a $2.00 school registration fee and shipping costs. Specimen sets of materials used in an earlier program (20 cents a set), registration blanks, and detailed literature about the program may be obtained from the Cooperative Test Division of the Educational Testing Service, 15 Amsterdam Avenue, New York 23.

A BRANCH MEETING OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY ALUMNI

AT a dinner meeting of the New York branch of the Massachusetts Institute of Technology Alumni Association, December 7, Karl T. Compton, chairman of the Research and Development Board of the National Military Establishment and former president of the institute, delivered the major address. Other speakers were C. George Dandrow, vice-president of the Johns-Manville Company, newly elected president of the association, who gave the speech of welcome, and James R. Killian, who succeeded Dr. Compton in the presidency of the institute.

Dr. Compton traced the development of the institute and recounted some of the accomplishments of its outstanding alumni. He predicted that the years ahead would find the institute training men for equally important work, continuing "to provide education in the important established lines of technology," and developing "new techniques or new fields of education and research when their values can be discerned." Dr. Compton believes that, since we live in an ever more technological world, "our increasingly civilized population requires ever better trained and better informed leadership, and it is the duty of the institute to develop new generations of men and women to perform effectively in this environment and, wherever possible, to set improved patterns for this development."

In an interview with representatives of the press preceding the dinner, Dr. Compton was asked for his opinion of the possession by the Russians of the atom bomb. He said that no one could know just what progress the Russians had made in atomic research. His chief recommendation was for clear and honest public education on atomic and bacteriological welfare as the best defensive measure against the danger of panic in case of sudden attack. In commenting on his new position, he said that the research division's program now includes the work of 22,000 civilian scientists and about the same number in the armed forces.

Dr. Killian emphasized the importance of a broad education in the humanities for those taking major work in the technological fields. He believes, and the institute had proved, that attention to courses in music, art, literature, and so forth and participation in extracurricular activities can be required without weakening professional training.

A BROAD CORE CURRICULUM FOR THE COLLEGE

OVERSPECIALIZATION in college, especially during the freshman and sophomore years, has been recently condemned in a resolution passed by the faculty senate of the University of Illinois.

The resolution is as follows:

> Resolved that the establishment of narrowly prescribed curricula in the four undergraduate years, leading to professional degrees, is not good educational policy. It is requested that the various schools and colleges . . . reexamine their existing programs with the idea of establishing broad core curricula for the first two years. It is recommended that specialized training be deferred, at least until the junior and senior years, when it can be fitted into fields of concentration.

The Committee on Educational Policy, which was responsible for this resolution, interpreted "broad core curriculum" as:

> a combination of fundamental and basic studies and general education which would serve students having a considerable range of interests. It is not expected that a single core curriculum would serve for all, but each school or college might establish one or as many as its diversity of activities would seem to require.

FOUNDATIONS FOR BUSINESS EDUCATION

THE Eastern Business Teachers Association appointed a Resolutions Committee to draw up a statement of fundamental principles in business education, James R. Meehan, president, recently announced. The full statement will be discussed at the 52d annual EBTA Convention which will take place, April 13–16, in New York City.

The committee, which is made up of representatives of business, as well as of public and private schools, includes: M. Herbert Freeman, chairman, business education department, New Jersey State Teachers College (Paterson), chairman; Ruth Cobett, Forest Park High School, Baltimore; James Gemmell, chairman, department of business education, the Pennsylvania State College; Margaret M. Killelea, John

Adams High School, Ozone Park, N. Y.; John Morrow, state supervisor of distributive education, Vermont; Louis A. Rice, principal, Packard School (New York City); John E. Whiteraft, supervisor, Bureau of Business Education, New York State Education Department; Myron C. Fisher, dean, the Fisher School (Boston); Harold M. Perry, personnel director, Colgate-Palmolive-Peet Company, Jersey City; Robert E. Slaughter, McGraw-Hill Publishing Company; and Alvin Weitz, Bayonne (N. J.) High School.

Notes and News . . .

Report on increase in membership for week ending December 27: 4.

Appointments, Elections, Resignations, Retirements

THE REVEREND CLAIRE M. STEWART, field director of the Restoration Program of the Presbyterian Church in the U.S.A., has assumed new duties in the newly created post of vice-president and director of public relations, Centre College (Danville, Ky.).

CYRIL D. MARSHALL-DAY, professor of clinical dentistry, School of Medicine, University of Rochester (N. Y.), has been appointed dean, Dental School, Tufts College (Boston), effective January 31. Dr. Marshall-Day will succeed Joseph F. Volker whose appointment was reported in SCHOOL AND SOCIETY, May 31, 1947.

LEE S. EVANS, associate professor of economics and management and acting chairman, department of management, University of Denver, has been appointed assistant dean of the university's College of Business Administration.

FRANK LORIMER, chairman of the department of sociology, College of Arts and Sciences, the American University (Washington 6, D. C.), has been named director of the International Union for the Scientific Study of Population, with administrative offices in the university. The union, which is an association of professional research workers in the field of population studies, was organized in Paris in 1928, with the late Raymond Pearl of the Johns Hopkins University as chairman of the organizing committee and first president, and now has membership in 31 countries. The president is Adolphe Landry, French historian and member of the Conseil de la Republique. Alfred J. Lotka, formerly assistant statistician, Metropolitan Life Insurance Company, is the American vice-president and chairman of the National Committee of the United States.

GEORGE E. ZIEGLER, whose appointment as executive scientist, Midwest Research Institute (Kansas City 2, Mo.), was reported in SCHOOL AND SOCIETY, July 21, 1945, has been appointed director to succeed Harold Vagtborg whose appointment was reported in these columns, November 18, 1944. Dr. Vagtborg resigned about six months ago. Clayton O. Dohrenwend, research consultant, has been named to the newly created post of assistant director.

RICHARD H. LOGSDON, whose appointment as assistant director of libraries in charge of technical services, Columbia University, was reported in SCHOOL AND SOCIETY, August 16, 1947, has been named associate director of the libraries. Charles W. Mixer, formerly in charge of general administration, has succeeded Dr. Logsdon. John Berthel has been appointed Nicholas Murray Butler librarian in charge of the service units of Butler Library, the East Asiatic and Paterno libraries, and the Library of Journalism. William S. Budington has been appointed librarian for engineering and the physical sciences, and Helen Yerkes has been named personnel officer for the library system.

FOSTER E. MOHRHARDT, whose appointment to the staff of the School of Library Service, Columbia University, was reported in SCHOOL AND SOCIETY, September 27, 1947, has been named director of library service for the Veterans Administration, succeeding Francis R. St. John who resigned, December 17, to accept a post with the Brooklyn Public Library.

BRUCE M. BROWN, former reference assistant in the Englewood (N. J.) Public Library, has been appointed assistant reference librarian, Colgate University (Hamilton, N. Y.).

JOHN W. GOWEN has succeeded the late E. W. Lindstrom as head of the department of genetics, Iowa State College (Ames). Dr. Lindstrom died on November 8, 1948.

TIBOR RADO, chairman of the department of mathematics, the Ohio State University, has been appointed to one of the newly created University Research professorships, effective today. Dr. Rado is the first to hold the professorship which was authorized by the Board of Trustees in 1946 with the specification that the recognition be for work of "university-wide character as distinguished from those of strictly departmental character." Ira A. Gould, professor of dairy manufacturing, University of Maryland, will go to the university as chairman of the department of dairy technology, College of Agriculture, February 1.

PAUL F. FENTON, for the past three years research assistant in nutrition, School of Medicine, Yale University, has been appointed associate professor in the department of biology, Brown University, effective July 1, 1949. At that time Dr. Fenton will transfer his experiments in connection with cancer research to the university.

AMONG recent appointments to the staff of the University of Washington (Seattle 5) are the following: Walles Thomas Edmondson, assistant professor of zoology, and David Harrison Garber, instructor in physics. Grace Beals Ferguson has been promoted to a professorship in medical social work; Walter Gilbert Johnson, to an associate professorship of Scandinavian languages; and Ethel Dever Kastner, to an instructorship in Far Eastern. . . . Leaves of absence have been granted to: Frances M. Earle, associate professor of geography; Harold Philip Everest, director, School of Journalism; Carlos Garcia-Prada, professor of Spanish; James Kendall Hall, professor of public utilities and public finance; Howard Lee Nostrand, executive officer of the department of Romance languages and literature; and Earl Winton Pettibone, Jr., assistant professor of transportation.

DEANE E. WALKER, superintendent of schools, Marshall County (Ind.), was elected state superintendent of public instruction, Indiana, in November. Dan Schafer, principal, Tippecanoe Township School, succeeded Mr. Walker, December 10.

D. GRANT MORRISON AND J. GUY ROWLAND were recently appointed to the staff of the state superintendent of public instruction, Washington. Dr. Morrison, formerly instructor in mathematics, University of Washington, has been named supervisor of junior-college education; Mr. Rowland, director of transportation, to succeed Tillman Peterson, whose appointment to the staff was reported in SCHOOL AND SOCIETY, November 6, 1943. Mr. Peterson is now supervisor of school-district organization.

Recent Deaths

LAURENCE DUGGAN, director, Institute of International Education, died, December 20, at the age of forty-three years. Dr. Duggan had served as a salesman for Harper and Brothers (1927–28); secretary, Latin American division (1929–30), and director (since 1946), Institute of International Education; researcher (1930–33), specialist on Cuban affairs (1933–35), chief (1935–41), Division of American Republics, adviser on political relations (1941–44), and director, Office of American Republics Affairs (1944), Department of State; assistant diplomatic adviser, United Nations Relief and Rehabilitation Administration (1944–45); and private consultant on Latin America (1945–46).

FELIX WEILL, professor emeritus of Romance languages, City College (New York), died, December 20, at the age of seventy-seven years. Professor Weill had served as principal of a school in Mexico City (Mexico) from 1896 to 1899, and served at City College as instructor in Romance languages (1901–13), assistant professor (1913–22), associate professor (1922–29), professor of French (1929–31), and professor of Romance languages and head of the department (1931–39).

OLIVER WENDELL HOLMES MITCHELL, professor of public health, Syracuse (N. Y.) University, died, December 20, at the age of sixty-two years. Dr. Mitchell had served as assistant in pathology and bacteriology (1906–08), assistant pathologist and anesthetist in the hospital (1909–10), instructor in pathology and bacteriology (1910–12), assistant professor (1912–13), and associate professor (1913–14), University of Missouri; and at Syracuse University as bacteriologist (1914–15), professor of bacteriology and public health (1916–43), and professor of public health (since 1943).

FRANK IRWIN, associate professor emeritus of mathematics, University of California (Berkeley), died, December 25, at the age of eighty years. Dr. Irwin had served as instructor in mathematics (1894), Harvard University; instructor (1908–11), Princeton University; and at the University of California as instructor (1911–18), assistant professor (1918–23), and associate professor (1923–38).

ELEANOR WHITMAN, author, minister, and former member of the staff of Wellesley College, died, December 25, at the age of seventy-five years. Mrs. Whitman had taught Biblical history and literature at the college for seven years. She was a minister in the Society of Friends for a number of years and had written books on Biblical subjects, including the life of Saint Paul and the development of the Hebrews.

Coming Events

THE Institute on Adjustment of the Aging Population will be held in the School of Social Welfare, University of California (Berkeley 4), February 1–4, according to an announcement released to the press by Milton Chernin, dean of the school. The university expects a representative attendance from most of the Western states, and nationally known gerontologists and leaders in geriatrics, old-age counseling, vocational counseling, and allied fields will be among the speakers.

CATHOLIC BOOK WEEK, sponsored by the Catholic Library Association, will be observed throughout the country, February 20–26. The purpose is "to encourage and stimulate the reading and writing of Catholic literature in its various forms." Projects in connection with the observance will embrace book aid to war-stricken countries, radio programs, and a book-week kit. The kit, at a cost of $1.00, may be obtained by writing to Catholic Book Week Kit, P. O. Box 25, New York 63.

Other Items

WILLIAM W. BRICKMAN, special book columnist for SCHOOL AND SOCIETY, announces his topics for review for the next six months: January, "General Education"; February, "Educational Biography"; March, "International Educational Relations"; April, "College and University History"; May, "UNESCO"; and June, "Intergroup Education." Publishers or authors desiring reviews of recent books in these fields will render our readers a service by sending copies to SCHOOL AND SOCIETY, 15 Amsterdam Avenue, New York 23.

EFFECTIVE January 1, the Quarrie Corporation, publishers of the "World Book Encyclopedia" and "Childcraft," has merged with Field Enterprises, Inc., of which it has been a subsidiary since December 1, 1945. The merger involves no change except in name, with Marshall Field as president and the officers of the corporation becoming officers of Field Enterprises, Inc. The corporation will operate hereafter under the name: Field Enterprises, Inc.—Educational Division.

A COURSE of study in nursing, leading to the degree of B. S. in Nursing, has been established in the evening division of Tulane University (New Orleans 18). The course "will offer a broad basis for specialization for those nurses who demonstrate ability and aptitude for advanced training. It will enable the most promising students to achieve both the certificate of registered nurse and the degree in nursing."

Shorter Papers . . .

NEEDS IN ADULT EDUCATION TODAY

ROBEN J. MAASKE
President, Eastern Oregon College, La Grande

THE latter part of the nineteenth century witnessed the great development of the elementary school and the period from 1900–1930 represented the flourishing growth era of secondary schools in the United States.

Higher education has been on the upswing gradually since 1925, with the exception of the depression period in the 30's and the slowdown during World War II. Its peak development in terms of enrollment will probably come in the 1960's and continue to rise gradually thereafter as greater numbers of high-school graduates proceed to colleges.

Adult education has yet to find its proper place in the sun, but increasingly its importance is being recognized. General predictions are that it will receive increasing emphasis during the period 1950–1980. Adult education is here defined as follows: *Adult education is a group-learning effort, voluntarily undertaken by persons past adolescence, outside formal school institutions, deliberate in purpose, based on the interests and needs of the learner, for the purpose of enrichment and enlightenment.*

While individual learning after a fashion is done throughout adult life in an informal way as an accompaniment to living, adult education is conceived of in this article as chiefly a group-learning effort, in order to make its chief function substantially clear.

It has been said that the most impressive thing about a man is his ability to learn, but the most depressing thing about him is the poor use he makes of it. The *Christian Science Monitor* in a recent editorial deplored the situation generally in these words:

> What is the rate of political illiteracy in the United States? The sorrowful answer must be: High. Public opinion polls have indicated that fewer than half of American adults know how many U. S. senators there are from each state. Half of them have never heard of Harold E. Stassen. Two thirds of them don't know where Greece is; and 40 per cent don't know who General Franco is.

Other examples might be cited. The situation is almost as serious as it is ludicrous. In the face of the imperative present need of clear and logical thinking on the part of all adult Americans, it is somewhat depressing, to say the least, to contemplate the extent of the ability and capacity of the average adult to respond intelligently to the challenge of these years.

Time is insufficient to wait for the next generation's product of our schools and colleges to repair the deficiency. Hence, the need and the challenge of the field of adult education. It must play an exceedingly aggressive role. Its important significance must be better understood, not only by educators themselves but by the public at large. What, then, shall be its emphasis?

There are several areas of interest upon which the educational program for adults needs to focus attention at this time. They are all of immediate need

but contain long-time implications as well. Each will be discussed briefly and concisely in the following paragraphs. They are not necessarily listed in order of importance.

1. *Educating Adults for World Citizenship.* One of the pressing needs of the day is to expand the vision of adults beyond the sphere of national interest to a comprehension of the world community. The present gap is large. National provincialism is traditional in the average adult.

True, many adults have taken an increased interest in international matters. Often, however, this cursory interest leads to faulty opinions and quick judgments of only surface character. The need is for more accurate information and a more thorough insight into the complex nature of problems among nations and within individual nations. This requires study, group and individual discussions, and a searching of sources other than the daily newspaper and newsstand magazines.

The picture is aggravated here in America by the fact that high-school and even college graduates for the most part have studied primarily only the cultures, languages, and the literature of West-European countries. Adults coming up through the school system have a relatively meager knowledge of the resources, economic problems, traditions, mind-sets, and customs of the peoples of the Orient, Eurasian areas, and Latin-American regions.

2. *Preparing Adults for Social Change.* It is axiomatic that the ultimate success of a democracy is dependent upon the contributions of well-informed, enlightened citizens. Changes take place too rapidly to rely wholly upon the product of formal educational institutions.

Man must continue learning to keep tuned to the times. Some may be able to do it through individual energy expended in seeking information and understanding. Adult-education classes and groups in organized programs are needed to stimulate a larger number of persons to gain this necessary information and understanding. This applies to local, state, and national affairs and problems as well as international.

For example, on a national plane, there is a great lack of comprehension of the intricate and puzzling aspects of labor-management difficulties in relation to legislation, group or socialized health plans, social-welfare problems, military-training needs, tax systems, potential unemployment, and similar vexatious social, economic, and political problems. These cannot be left alone to the judgment of legislators or experts for solution.

3. *Educating Adults for Technological Change.* This particular area of adult-learning needs involves not only the retraining of adults vocationally to keep pace with technological changes but to prepare them mentally to anticipate and to live currently with such inevitable changes.

The retraining of veterans and war workers is being accomplished reasonably satisfactorily. The real need in the coming years is the systematic training for improvement on the job, in industry, in commercial enterprises, in business establishments, and in public service. To some degree this need prevails also in the professions.

This opportunity constitutes a real challenge in adult education. Relatively little is being done, compared to the potentialities in this phase of adult education. However, enough experience is available to indicate clearly the possibilities.

4. *Educating Adults for Creative Diversions.* One need only to examine the ways in which adults generally utilize their leisure time to wonder whether increased leisure time is really a blessing—or a curse. The schools have placed some emphasis in recent years upon preparing graduates for constructive and wholesome leisure-time pursuits. Certainly, the results as yet are not satisfactorily apparent.

The need here is an adult-education program which will afford opportunities to develop or continue an interest, a hobby, or a talent, in literature, in the arts, or in music, drama, and other fields. It will provide an outlet which will yield satisfaction to the individual as a group member and at the same time afford creative diversion. Perhaps also it can provide a healthful antidote for the fast pace of modern life.

History records that the people of great nations, not too long before their national decadent periods became all too apparent, were guilty of irresponsible frivolity, licentiousness, and often immorality in wasteful use of their idle time. Hence, the strong justification of the need in this area of adult education.

5. *Better Education for Special Groups.* In this category we think of the need of adult education in such special groups as illiterates, the foreign-born, the physically handicapped including the hard-of-hearing and the partially seeing, and the state and Federal prison groups.

In the past, perhaps too much emphasis has been placed on the adult education of certain of these groups, such as the illiterates and the foreign-born. In the minds of some, adult education, as such, is associated almost wholly with these groups. The need of continued learning for the members of these various special groups is quite apparent without elaboration; and

6. *Educating Adults for Family Living.* The trends in family life indicate a rather marked increase in divorces and maladjustments of various kinds. Perhaps to some extent these are due to factors in

our modern living pattern beyond specific remedy.

However, schools and colleges have been negligent in making adequate provision for studies to prepare young men and women for their important responsibilities in family living. Even so, the learning becomes more impelling as they meet first problems in early marriage, in rearing children, and in meeting family-life problems of varied kinds. Clinics, adult classes and discussion groups, family-life advisement centers, and other similar attempts to aid adults in solving their problems have proved very helpful.

Students of adult education know that those states which have a director of adult education in the state department of education or state superintendent's office have by far the best state programs in adult education. Usually such directors have state advisory councils to assist them in planning and organizing state and community programs.

General extension divisions of universities and colleges have normally been inadequately financed to do more than offer, mainly, credit courses, short courses, correspondence courses for credit, and similar enterprises. Some excellent work is being done, but the local communities are touched only sporadically.

At the community level the program of adult education is usually dependent upon the leadership of such functionaries as the school superintendent, the public librarian, or leaders of service and professional groups. Too few superintendents are acquainted sufficiently with the learning needs of adults or have training to enable them to inaugurate an adult-education program. Then, too, the administration of the public-school program has been increasingly a time-, energy-, and finance-consuming task, leaving little time for consideration of an adult-education program.

The needs in organizing for effective adult-education programs may be summarized thus: (1) Need for more directors of adult education in the state education departments; (2) need for more funds to enable general extension divisions of universities and colleges to offer a broader program in the areas they serve; (3) need for training and an awareness of how to proceed in organizing broad community programs in adult education on the part of superintendents of schools; and (4) a need for better preparation of supervisors, leaders, and teachers of adult classes, discussion groups, forums, and other types of adult-learning opportunities.

Summary. An attempt has been made to point out clearly in the foregoing paragraphs the urgent "adult-learning needs" which exist today and which are for the most part unsatisfied. Attention has been focused also upon the "needs in organizing for adult education" in states and in local communities. The whole problem constitutes an educational task of first magnitude and offers a real challenge to those who occupy educational positions of leadership in states and local communities in the whole United States.

Reports . . .

EDUCATIONAL REFORM IN AUSTRIA

THOMAS E. BENNER
University of Illinois

As at the close of the first World War, it is the Socialist Party of Austria whose proposals for educational reform again seem to offer the greatest hope for the further democratization of Austrian education. The nature of the Socialist reform proposals is indicated in a memorandum prepared at my request by the Vienna *Stadtschulrat*. The memorandum, which follows, was written in English and is presented without editing of any kind:

Our Aims in School Reform

School Organization: 1.) Addition of a *ninth year* to the eight years of compulsory school attendance. For those who leave school after finishing that year it is to be used for general preliminary vocational training, for those entering a higher general or vocational education it would be the first year of that upper school.

2.) The age *from 11 to 14* is now covered by two parallel school systems, the *Hauptschule* (upper section of the elementary school) and the lower section of the *Mittelschule* (secondary school). This parallelism is un-economical, un-democratic, un-social. The two schools should be *merged into one Allgemeine Mittelschule* (consolidated junior high school).

Curriculum. Curricula in general, and particularly those of the age mentioned above, should be *freed of premature academic and theoretical subjects and methods.* This implies first of all *postponing Latin* to higher grades.

Social Studies to be an important matter in all types of schools.

History to be taught under world-wide scope, the main emphasis being put on modern times.

International understanding and peace to be promoted by more intimate knowledge of foreign cultures.

A certain *flexibility* to be introduced into our rigid curricula, giving the individual pupil an opportunity to choose between different subjects.

Methods. Learning by doing, promoting *self-activity and initiative,* is to be the guiding methodical principle in all grades.

School discipline is to be based on *self-responsibility;* pupils' *self-government,* including responsible administration of extra-curricular activities, is to be developed as a training for democracy.

Teachers' Training. Elementary teachers, at present trained in *Lehrerbildungsanstalten* (teachers training schools), starting at the age of 14, and cramming general and vocational education into a course of 5 years, henceforth shall get, first of all, *a normal secondary education;* after that, intensive theoretical and practical studies for two years in *Pedagogical Institutes or Academies,* connected with (but not embodied into) the universities.

This same institute may take over the pedagogical training of the *secondary school teachers,* so far pitifully neglected by the university, where their scientific studies are taking place.

Religious Instruction. Religious education would best be left entirely to the discretion of the Churches in extra-curricular Sunday-Schools. Since however, by force of tradition, religion is a subject matter compulsory for all school curricula we demand that *attendance shall depend upon free decision,* for children up to 14 by their parents, for older students by their own conscience.

It is a truism that a national educational system grows out of and is inextricably linked with the nation's culture. The only exceptions to this generalization arise when a new system is imposed by force. Even these exceptions tend to disappear when the force has been removed.

As a participant in the occupation of Austria since the close of the war, the United States has been interested in the democratic reform of Austrian education. It has refused to use the method of force, both because it believes that force under any circumstances is the worst means to such an end, and because Austria, though still occupied because of Soviet lust for power, is by official, Four-Power agreement considered to be a liberated rather than a conquered country.

American efforts to assist in the democratic reorganization of Austrian schools accordingly must take the form of encouragement to elements within the Austrian nation which are interested in and equipped to carry on democratic educational reforms. The statement of aims of the Vienna *Stadtschulrat,* quoted above, is evidence that its authors are among those who deserve such encouragement and assistance.

PROFESSIONAL DEVELOPMENT OF CIVILIAN SCIENTISTS EMPLOYED IN NAVAL LABORATORIES

BARTON MORGAN

Iowa State College, Ames

IT probably takes much more effort to maintain a scientific education than it does to acquire it in the first place. If one is to make progress during these times of rapid developments in the several fields of science, it takes still more effort.

The Scientific Personnel Division of the Office of Naval Research has been vitally interested in developing co-operative arrangements between the Navy and institutions of higher education which will provide opportunity for all civilian scientists and their supporting semiprofessional employees in the Navy engaged in the various fields of science to continue and extend their professional development.

It wishes to do this to assure: (1) that a scientist working in naval laboratories may keep up-to-date and grow professionally; (2) that scientists in naval laboratories may be prepared to undertake in the future more advanced and difficult assignments of work; (3) that opportunities for professional growth and development while engaged in the naval laboratories will help to attract and retain scientists of the highest quality in numbers needed for the work of the Navy; (4) that naval scientists as a group shall be in the forefront of scientific competence.

As one step in the development of plans for co-operative arrangements between the Navy and institutions of higher education for the education of civilian scientists employed in the naval laboratories, the Division of Scientific Personnel invited a group of educators[1] to meet in Washington to help plan this co-operative arrangement.

This advisory committee met January 24 to 31, 1948, in Washington. At its first meeting A. H. Hausrath, director of scientific personnel, ONR, and his staff outlined the job they had in mind for the committee to undertake. The committee prepared tentative statements that were reviewed from time to time by staff members of the naval laboratories and of the Office of Naval Research, but at no time was any effort made to influence the report of the committee. A limited edition of the report of the committee, in the form of recommendations for needed research studies, has been published in mimeograph form.

The plan proposed in the report provides that the educational program at any laboratory be sponsored by one or more approved colleges or universities. The work is largely on the graduate level and is taken by students working for an advanced degree or doing postdoctorate work. A few undergraduate and special students are also enrolled.

[1] Barton Morgan, head, department of vocational education, Iowa State College; Lewis A. Dexter, sociologist, Hobart College; E. F. Lindquist, research statistician, University of Iowa; John Dale Russell, director, Division of Higher Education, U. S. Office of Education; R. A. Seaton, dean, School of Engineering, Kansas State College; J. R. Van Pelt, director of research education, Battelle Memorial Institute.

The plan operates in several different patterns. The courses offered by the university may be taken on the campus of the university by naval scientists who are on full-time leave or by scientists who are working fulltime and who attend classes offered after working hours or on nonwork days. Another arrangement is for the courses to be offered at or near naval establishments and taught by a regular member of the university staff or by a well-qualified member of the naval laboratory approved by the university. Men from the naval laboratory who are qualified to teach graduate courses are frequently former university staff members or people of superior academic training and outstanding research experience.

Research work may be done in naval laboratories for residence-type thesis credit under the direction of a member of the staff of the university, or a member of the staff of the laboratory who has been approved by the university.

Conversely, arrangements are being made whereby graduate students and faculty members of colleges and universities may use the facilities of naval laboratories in certain fields of research where the naval laboratories have facilities and equipment that are not available in the colleges and universities.

There are other interesting features of the plan for the development of civilian scientists employed in naval laboratories. For example, considerable use is made of specialists who are not associated with the Navy to serve as advisers and as consultants.

Thus the facilities of the naval laboratories may help the institutions of higher learning and the institutions of higher learning may help the naval laboratories. The net result is more well-educated scientists both in and out of the employment of the Navy. The Office of Naval Research holds to the idea that a large number of well-educated scientists is an asset to the nation, whether or not they be associated with the Navy.

The committee recognized the critical nature of the Navy's scientific-personnel problem in light of the national supply of scientists and the level and scope of their present training. It urged attention to the problem of encouraging and stimulating creative, and sometimes unorthodox, thinking on the part of research scientists in order that they might be more likely to uncover basic principles. In the military departments such emphasis might lead to the development of new and unprecedented weapons, devices, processes, and techniques useful in the preservation of peace or in the waging of war. The scientific attitude of mind and the scientific method were also stressed.

The committee then outlined nine projects to be carried forward by the Division of Scientific Personnel of the Office of Naval Research. These nine projects, while separate, were closely related to one another and all were directed toward the professional development of civilian scientists employed in the naval laboratories. A brief statement of each of these nine projects follows:

1. *Determination of Science-Education Needs in Naval Establishments.* The need of professional development of scientists employed in naval laboratories is generally recognized by the Office of Naval Research. Just what these specific needs are, however, is not so clearly known. It appeared that any Navy-wide program designed to make more educational opportunities available should be based on known needs.

2. *Survey of Past Experiences, Present Practices, and Current Thinking in Respect to the Professional Development of Scientific Personnel.* A number of agencies and organizations operate educational programs for the development of their scientific personnel, either in co-operation with universities or independently. Some of these programs are of high quality and it appears that a study of them should suggest some important principles and features that should be given serious consideration in planning programs for the civilian scientists employed in the naval laboratories.

3. *Survey of University Policies on Participation in Programs of the Proposed Type.* The Division of Scientific Personnel is at present co-operating with a few universities in the professional development of scientific and engineering personnel of the Navy. It is interested in co-operating with many more institutions and is, therefore, interested in knowing the policies of the graduate degree-granting institutions of higher learning relative to programs that might be used by a naval scientist. It is expected that this project will serve to identify those schools whose administrators and faculty show an interest in the proposed venture and which might, therefore, be able to co-operate more fully with the Navy at this time. It is hoped that this study will also stimulate those institutions not previously confronted with this problem to consider their potential relation to the Navy's program.

4. *Suggestions for a Navy-Wide Program for the Professional Growth of Scientists.* This project will identify the important features and principles for a Navy policy on the professional development of civilian scientists. It is believed that such a statement of policy should officially provide for the encouragement of professional development of its scientists by mak-

ing it possible and convenient for them to take advanced work at universities.

5. *What Should be Taught to Encourage Creative Thinking?* The problem of what should be taught to encourage creative thinking is a difficult one, but the committee thought that some progress might be made if the problem were attacked courageously. As a start in this direction scientists need to advance their professional training in two dimensions: depth and breadth. It was recommended that younger scientists should be trained in a variety of methods of research.

6. *Setting Up and Operating a "Pilot" Program.* It was recommended that pilot programs be established to test various types of training programs. It was thought that such tests would reveal superior practices which should be utilized more extensively, on a Navy-wide basis.

7. *Evaluation of the Pilot Program.* The suggestion that an experimental or pilot program be conducted (Project 6) in itself suggests that evaluation will be made of the results of the tests. It is recognized that it will be very difficult to evaluate a program of this type, but it is thought that it should be undertaken.

8. *Public-Relations Techniques for Making Known and Attractive the Program of Professional Development to Naval Personnel Engaged in Scientific Activities.* If the program of professional development of civilian scientists at the naval laboratories is successful in attracting and retaining scientists in the naval service, it must be widely used by these scientists. It will not be widely used unless it is widely and favorably known, both in and out of naval circles.

9. *Final Report of the Study.* The purpose of this project is to present the valid findings of the other eight projects in the study. These findings should be useful in setting the stage for similar programs of training in other Federal and private laboratories.

The central theme in all of the projects was the professional development of civilian scientists employed in naval laboratories through systematic co-ordination with institutions of higher learning.

A SUMMER CAMP THAT IS FUN—AND ALSO PROFITABLE

JEANNE MOODY
The Chickasha (Okla.) Daily Express

PROFITABLE pleasure is provided on the campus of Oklahoma College for Women in Chickasha in the form of a new kind of summer camp especially designed for children with defective speech. The only camp of its kind in this part of the country, it was organized three summers ago by John Morris, director of the college's corrective-speech department, with the indorsement of Dan Proctor, college president, and the Board of Regents. The camp proved so successful after its first summer that it has been made a regular part of the summer activities on the campus, and its facilities are being increased to accommodate larger groups.

The success of such a camp cannot be measured in speech progress alone, because many other factors are involved—the self-confidence of the child, gratitude of the parents, and the personal satisfaction of Mr. Morris and his assistants in knowing their work has not been in vain.

Children accepted for the camp range in age from 7 to 12 years. They arrive early in June and spend eight weeks on the campus working on their speech defects and enjoying the recreational features of any other summer camp. They are housed in one of the smaller college dormitories where two camp speech supervisors try to maintain a "homelike" atmosphere at all times. Upon arrival a child is thoroughly tested for all speech defects. His speech at the beginning of the camp is recorded, and his progress is noted from time to time by additional recordings.

The children enjoy a very normal camp existence with the exception of two private clinic periods a day, in the morning and afternoon. Directed recreation, craftwork, and a rest period are only a few of the things scheduled each day. A certain period is set aside each day for "swim time" in the college indoor pool. College physical-education majors who have passed Red Cross examinations serve as lifeguards. In addition there are frequent trips to the city park. A free Saturday movie is provided by a Chickasha theater, and the group is admitted once a week to a Sooner League baseball game at the Chickasha ball park. On Sundays the children attend the Sunday schools and churches of their choice, accompanied by student supervisors. Occasionally they spend a week end at home, or their parents visit the camp.

Students working with the children in the clinic periods have studied under Mr. Morris and have also taken special courses in psychology, and are interested in children. The college students planning to become professional speech clinicians gain invaluable experience from assisting Mr. Morris in the summer camps. The camp director personally oversees training and progress of each child, thus helping the children and the clinicians as well.

During the summer Mr. Morris and his assistants become friends with the children. It is this friendship which helps promote progress in each case. If a child does not like his instructor, he may be unwilling

to try to correct his speech—and, if the will of the child cannot be won, the camp will be of no avail to him. Clinic periods are made as entertaining as possible. Pictures and games are employed, where possible, in helping children to learn to make various sounds.

Mr. Morris and his assistants use several approaches in teaching children to make certain sounds correctly. In the visual approach, the pupil observes the instructor as he utters the sounds correctly. He learns positions of tongue and lips and then observes himself in the mirror as he attempts to imitate his instructor. The audio approach consists of repetition of the sounds again and again by the clinician to help the child train his ear to hear those sounds correctly. If the child learns to hear a sound correctly, he will learn more easily to pronounce it correctly. The third approach is kinesthetic. In this approach the pupil is asked to place his hand on the instructor's throat to feel the vibration or lack of vibration caused by a certain sound. Or he places his hand in front of his mouth to note the amount of air necessary to produce a sound.

An important factor to be remembered by a clinician, according to Mr. Morris, is to give praise for a job well done. Such encouragement causes the children to exert more effort than they otherwise would.

Children attending the camp represent a number of different types of speech defects, and each must be dealt with individually. A number have defective speech caused by spastic paralysis and other birth injuries. Then there are those with cleft palates, retarded speech development as a result of childhood diseases, and "blurred" speech because of hearing losses. In addition there are, each summer, a number of children who use "sound substitution" commonly known as baby talk, and a number of stutterers.

Some pupils will show such improvement in one summer that they need no further clinical work. The more serious cases take longer. Three pupils attending this summer's camp were here last year; they have made remarkable progress each year, and are well on the road to normal speaking.

The college recently obtained from the War Assets Administration one of the larger hearing-clinic buildings formerly used by Borden Hospital. It is being moved to the college campus, and will provide much needed additional facilities for the college's corrective-speech department. Up to the present time, enrollment in the summer camp has necessarily been limited. The 1948 enrollment was only 13. New building facilities will allow for expansion of the college's corrective-speech department and growth of the summer camp which is becoming more popular as each summer passes.

RECENT Publications

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AUDEN, W. H. (Editor). *The Portable Greek Reader.* Pp. x + 726. Viking Press. 1948. $2.00.
This is the culture of Greece seen through its greatest writers from Homer to Galen in the best English translation.

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The Facts on Federal Aid for Schools. Pp. 23. National Education Association, 1201 16th Street, N.W., Washington, D. C. 1948. $.50.
American education is, and should continue to be, primarily a state and local enterprise. All control of what is taught and all possible responsibility for financing the schools should be retained by the separate states and communities.

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GILLIN, JOHN. *The Ways of Men.* Illustrated. Pp. xv + 649. Appleton-Century-Crofts, Inc., 35 West 32d Street, New York. 1948. $4.00.
Those who are familiar with the extant books on anthropology will find in the present work some departures from the conventional outlines both in materials and in point of view. An attempt is made to place the primate order and the human species in a functional relation to culture, and the data are arranged with this in mind. Also a systematic attempt is made to weave psychological theory and findings into a functional approach to culture.

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HOLLAND, CLEMENT (Compiler). *A Catalog of Free and Inexpensive Teaching Aids for High Schools.* Pp. 104. Consumer Education Study, NEA, Washington, D. C. 1948. $1.00.
The purpose of this catalog is to put into the teacher's hand a guide to some of the free and inexpensive instructional materials currently available.

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JESSEN, KARL F. W. *Botanik der Gegenwart und Vorzeit.* Pp. xxii + 495. The Chronica Botanica Co., Waltham, Mass. 1948. $6.00.
This classic, originally published in 1884, is considered the best, most concise, all-round history of botany ever attempted.

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KLUCKHOHN, CLYDE. *Mirror for Man: The Relation of Anthropology to Modern Life.* Pp. xi + 313. Whittlesey House, McGraw-Hill Book Company, New York. 1948. $3.75.
This book was the $10,000 prize winner in the Science Contest, sponsored by Whittlesey House and *Science Illustrated.* It is intended for the layman, not for the carping professional. The author takes anthropology apart and shows just what we can do with this science in the important task of reconciling conflicting cultures which confronts us today.

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KNAPP, ROYCE H. *Teaching the Social-Studies Problems Course in Selected Senior Schools.* Pp. 26. Contributions to Education No. xxv. University of Nebraska. 1948. $.50.
The author hopes that her conclusions and recommendations may prove fruitful for others who are faced with the same problems in their studies—called modern problems or problems of Democracy.

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OGG, OSCAR. *The 26 Letters.* Illustrated. Pp. 254. Thomas Y. Crowell Company. 1948. $3.50.
One of America's foremost calligraphers here tells the complete and fascinating story of writing characters. The author makes clear that letters are not merely geometric symbols; the characters themselves are a form of art that is a priceless heritage.

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RADIN, MAX. *The Law and You.* Pp. 190. A Mentor Book, The New American Library of World Literature, Inc., 245 Fifth Ave., New York 16. 1948. $.35.
The author has written this book especially for the Mentor Series because he wanted to reach the widest possible number of his fellow citizens. In it he shows that

the law is not a remote, mysterious, fearsome abstraction but a highly important, not at all frightening, part of the lives of everyone of us—an outgrowth and an expression of society itself.

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REUTER, EDWARD BYRON. *Handbook of Sociology.* Pp. viii + 233. Dryden Press. 1948. $1.75.
The occasional student who deliberately chooses sociology as a major field of study often does so because of mistaken notions concerning the content of this discipline. In this timely book he will discover his mistake.

•

ROMAN, MIGUEL FIGUEROA. *Planificación Sanitaria en Tucumán.* Illustrated. Pp. 48. Instituto de Sociografía, Collegio Libre de Estudios Superiores, Tucumán, Argentina. 1948.
A research monograph on planning for public health in a region in Argentina.

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RUSSELL, BERTRAND. *Human Knowledge: Its Scope and Limits.* Pp. xvi + 524. Simon and Schuster. 1948. $5.00.
The central purpose of this book is to examine the relation between individual experience and the general body of scientific knowledge in its broad outlines. It is taken for granted that scientific knowledge is taken for granted.

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SCHRAMM, WILBUR (Editor). *Communications in Modern Society.* Pp. vi + 252. University of Illinois Press. 1948. $4.00.
Fifteen studies of the mass media prepared for the University of Illinois Institute of Communications Research. These studies have as their objective: "to make available to all the peoples of the world the kind of communications content which will enable them to maintain a peaceful and productive society and which will also provide them with personal satisfaction."

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STEVENS, HENRY BAILEY. *The Recovery of Culture.* Pp. xvii + 247. Harper and Bros. 1948. $3.00.
Herein are interwoven strands of biology, anthropology, horticulture, philology, sociology, and religion, brought together to form what Toynbee calls the only true history—synoptic history—so says this modern-day agriculturist, Mr. Stevens.

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Student Council's Handbook. Pp. 144. The National Association of Student Councils, 1201 16th Street, N.W., Washington, D. C. 1948.
Contains a report of the 1948 Student Councils Conference held in Washington, June 23–25.

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SWINEFORD, FRANCIS. *A Study in Factor Analysis: The Nature of the General, Verbal, and Spatial Bifactors.* Pp. xi + 70. Educational Monograph No. 67. University of Chicago Press. 1948. $1.00.
The description of a battery of a number of mental tests in terms of a smaller number of factors is a statistical device the function of which is to condense a large body of information into a form that the mind can encompass with relative ease—hence this monograph!

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Universities in Need. Pp. 32. UNESCO, Paris. 1948.
Vividly descriptive, through copious illustrations, of how stricken universities in Europe are struggling to resume normal activities with few books and practically no equipment. It also depicts the hardships suffered by young men and women who, at terrific personal sacrifice, are endeavoring to gain a higher education. Copies may be obtained free of charge from Reconstruction Department, UNESCO, 19 Avenue Kléber, Paris, 16e.

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WEBB, BEATRICE. *Our Partnership.* Illustrated. Pp. xiii + 544. Longmans Green. 1948. $5.00.
The Webbs knew everybody; in this book we have Mrs. Webb's comments on both enemies and friends. It covers the years from 1892 to 1912 with great thoroughness and includes notes on later years.

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ZIMMERMAN, CARLE C. *The Family of Tomorrow: The Cultural Crisis and the Way Out.* Illustrated. Pp. xi + 256. Harper and Bros. 1948. $3.50.
The thesis of this work is the relation between the family system and cultural continuity. Civilizations are like airplanes; they change the man-animal from a mammalian to a human largely through the development and extension of value systems—the basic part of culture. To do this they create family systems.

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